

and in the present specification at page 4, line 20 to page 6, line 10.

It is believed that this application has been amended in a manner that places it in condition for allowance at the time of the next Official Action.

In the outstanding Official Action, claims 1-14 were rejected under 35 USC §112, second paragraph, as allegedly being indefinite for failing to particularly point out and distinctly claim the subject matter which applicants regard as the invention. It is believed that the present amendment obviates this rejection.

The Official Action alleged that claims 1, 3, 4, 9, and 10 were indefinite for containing terms that lacked antecedent basis. Accordingly, the claims have been amended in a manner that is believed to provide antecedent basis for the terms cited by the Official Action.

Claims 1-14 were also rejected for reciting the term "other excipients". The Official Action alleged that the term was indefinite because it was unclear what elements were included in the claim. Claim 3 was then further rejected because it was allegedly unclear whether the limitations inside the parentheses found within the claim were actually a recitation. The claims have been amended so that the term "other excipients" is no longer recited. Moreover, claim 3 has been amended so that the subject matter in the parentheses is no longer recited.

Thus, it is believed that claims 1-14 are definite to one of ordinary skill in the art.

In the outstanding Official Action, claims 1-14 were rejected under 35 USC §103(a) as allegedly being obvious in view of AKIYAMA et al. (EP 0514008). The Official Action then further rejected claims 1-14 as allegedly being obvious over the U.S. patent of AKIYAMA et al. These rejections are respectfully traversed.

Applicants believe that the AKIYAMA et al. publications fail to disclose or suggest the claimed invention. Both publications disclose gastrointestinal mucosa-adherent compositions. AKIYAMA et al. teach that the duration of action of various active ingredients can be prolonged by incorporating a viscogenic agent. A viscogenic agent is capable of increasing viscosity of a substance upon contact with water.

AKIYAMA et al. teach that these viscogenic agents may be used in pharmaceutical compositions or coatings for pharmaceutical compositions. The viscogenic agent is dispersed in the surface layer of a matrix particle containing a polyglycerol fatty acid ester and/or a lipid and active ingredient. AKIYAMA et al. teach that acrylic acid polymers act as satisfactory viscogenic agents.

However, the claimed invention is based on a sequence of matrices, namely, a lipidic, an amphiphilic and an hydrophilic matrix, that when combined together, provide the desired

controlled release and taste-making effects as discussed in the present specification on page 1, lines 4-15; page 4, lines 10-19; and page 19, lines 15-34.

Applicants believe that AKIYAMA et al. fail to suggest or even discuss the claimed matrix. Indeed, AKIYAMA et al. fail to discuss amphiphilic, hydrophilic and lipophilic matrices.

Applicants believe that AKIYAMA et al. actually lead one of ordinary skill in the art away from the claimed invention. Moreover, applicants note that AKIYAMA et al. disclose a mixed system. The mixed system comprises a matrix combined with a reservoir structure. The active ingredients are enclosed in a core surrounded by a layer that applicants believe is structurally distinct and non-obvious from the claimed invention.

The claimed invention relies on a uniform matrix system. Indeed, the release system of the present invention combines a macro-molecular diffusion due to hydrophilic components with a diffusion effect which is believed to result from the lipophilic components.

This stands in contrast from AKIYAMA et al., wherein AKIYAMA et al. disclose a diffusion release system determined by the presence of a layer (not included in a matrix) of a bioadhesive viscogenic agent. The bioadhesive viscogenic agent then delays the active ingredient diffusion by binding to the gastrointestinal mucosa. As AKIYAMA et al. and the claimed invention rely on a distinct release system, it is believed that

the AKIYAMA et al. publications fail to disclose or suggest the claimed invention.

In view of the present amendment and the foregoing remarks, therefore, it is believed that this application is now in condition for allowance, with claims 1-20, as presented. Allowance and passage to issue on that basis are accordingly respectfully requested.

Attached hereto is a marked-up version of the changes made to the claims. The attached page is captioned "VERSION WITH MARKINGS TO SHOW CHANGES MADE."

Respectfully submitted,

YOUNG & THOMPSON

By Philip A. DuBois
Philip A. DuBois
Agent for Applicants
Registration No. 50,696
745 South 23rd Street
Arlington, VA 22202
Telephone: 521-2297

June 12, 2003

VERSION WITH MARKINGS TO SHOW CHANGES MADE

IN THE CLAIMS:

Claim 1 has been amended as follows:

--1. (amended) [Controlled] A controlled release and taste-masking oral pharmaceutical [compositions] composition containing an active ingredient, comprising:

- a) a matrix consisting of C₆-C₂₀ alcohols or C₈-C₂₀ fatty acids or esters of fatty acids with glycerol or sorbitol or other polyalcohols with carbon atom chain not higher than six;
- b) an amphiphilic matrix; and
- c) an outer hydrophilic matrix in which a lipophilic matrix and [the optional] said amphiphilic matrix are dispersed[;
- d) optionally other excipients].--

Claim 2 has been amended as follows:

--2. (amended) [Controlled] The controlled release [compositions] composition as claimed in claim 1, comprising a lipophilic or inert matrix consisting of lipophilic compounds with a melting point below 90°C [in which] and wherein the active ingredient is at least partially inglobated and a hydrophilic matrix.--

Claim 3 has been amended as follows:

--3. (twice amended) [Composition] The composition as claimed in claim 1 [in which the], further comprising amphiphilic compounds that are polar lipids of type I or II [(lecithin, phosphatidylcholine, phosphatidylethanolamine)], ceramides,

glycol alkyl ethers, esters of fatty acids with polyethylene glycols or diethylene glycols.--

Claim 4 has been amended as follows:

--4. (twice amended) [Compositions] The composition as claimed in claim 1, [in which] wherein the lipophilic matrix consists of compound selected from the group consisting of unsaturated or hydrogenated alcohols or fatty acids, salts, esters or amides thereof, mono-, di- or [triglycerids] triglycerides of fatty acids, the polyethoxylated derivatives thereof, waxes, and cholesterol derivatives.--

Claim 5 has been amended as follows:

--5. (twice amended) [Compositions] The composition as claimed in claim 1, [in which] wherein the hydrophilic matrix consists of hydrogel-forming compounds.--

Claim 6 has been amended as follows:

--6. (amended) [Compositions] The composition as claimed in claim 5 [in which], wherein the hydrophilic matrix consists of compounds selected from the group consisting of acrylic or methacrylic acid polymers or copolymers, alkylvinyl polymers, hydroxyalkylcellulose, carboxyalkyl-cellulose, polysaccharides, dextrins, pectins, starches and derivatives, alginic acid, natural or synthetic gums, and polyalcohols.--

Claim 7 has been amended as follows:

--7. (twice amended) [Compositions] The composition as claimed in claim 1, comprising a gastro-resistant coating.--

Claim 8 has been amended as follows:

--8. (amended) [Compositions] The composition as claimed in claim 7, [in which] wherein the gastro-resistant coating consists of methacrylic acid polymers or cellulose derivatives.--

Claim 9 has been amended as follows:

--9. (twice amended) [Compositions] The composition as claimed in claim 1, [in which] wherein the active ingredient is wholly contained in [the] an inert/amphiphilic matrix, in the form of tablets, capsules or minitablets.--

Claim 10 has been amended as follows:

--10. (twice amended) [Compositions] The composition as claimed in claim 1 [in which], wherein the active ingredient is dispersed both in the [hydrophylic] hydrophilic matrix and in [the] a lipophilic/amphiphilic matrix, in the form of tablets, capsules or minitablets.--

Claim 11 has been amended as follows:

--11. (twice amended) [Compositions] The composition as claimed in claim 1, in which the active ingredient belongs to the therapeutical classes of analgesics, antitussives, bronchodilators, antipsychotics, selective β 2 antagonists, calcium antagonists, antiparkinson drugs, non-steroidal anti-inflammatory drugs, antihistamines, antidiarrheals and intestinal antiinflammatories, apasmolytics, anxiolytics, oral

antidiabetics, cathartics, antiepileptics, topical
antimicrobials.--

Claim 12 has been amended as follows:

--12. (amended) [Compositions] The composition as claimed in claim 10, [in which] wherein the active ingredient is selected from the group consisting of mesalazine (5-aminosalicylic acid), budesonide, metformin, octylonium bromide, gabapentin, carbidopa, nimesulide, propionylilcarnitine, isosorbide mono- and dinitrate, naproxen, ibuprofen, ketoprofen, diclofenac, thiaprophenic acid, nimesulide, chlorhexidine, benzydamine, tibezonium iodide, cetylpyridinium chloride, benzalkonium chloride, and sodium fluoride.--

Claim 13 has been amended as follows:

--13. (twice amended) [Compositions] The composition as claimed in claim 1, containing bioadhesive substances.--

Claim 14 has been amended as follows:

--14. (twice amended) [Pharmaceutical compositions] A pharmaceutical composition as claimed in claim 1, in the form of tablets chewable or erodible in the buccal cavity or in the first portion of the gastrointestinal tract.--